

### PCN#20200218000.2 Qualify TI Chengdu as an additional Assembly site for select devices Change Notification / Sample Request

Date:February 19, 2020To:PREMIER FARNELL PCN

Dear Customer:

This is an announcement of change to a device that is currently offered by Texas Instruments. The details of this change are on the following pages.

Texas Instruments requires acknowledgement of receipt of this notification within **30** days of the date of this notice. Lack of acknowledgement of this notice within 30 days constitutes acceptance of the change. The proposed first ship date is indicated on page 3 of this notification, unless customer agreement has been reached on an earlier implementation of the change.

If samples or additional data are required, requests must be received within 30 days of acknowledgement as samples are not built ahead of the change. You may contact the PCN Manager or your local Field Sales Representative to acknowledge this PCN and request samples or additional data.

This notice does not change the end-of-life status of any product. Should product affected be on a previously issued product withdrawal/discontinuance notice, this notification does not extend the life of that product or change the life time buy offering/discontinuance plan.

For questions regarding this notice, contact your local Field Sales Representative or the PCN Team (<u>PCN ww admin team@list.ti.com</u>). For sample requests or sample related questions, contact your field sales representative.

Sincerely,

PCN Team SC Business Services

### 20200218000 Attachment: 1

### **Products Affected:**

The devices listed on this page are a subset of the complete list of affected devices. According to our records, these are the devices that you have purchased within the past twenty-four (24) months. The corresponding customer part number is also listed, if available.

DEVICE DRV8702QRHBTQ1 CUSTOMER PART NUMBER null

Technical details of this Product Change follow on the next page(s).

PCN Numbe	<b>Number:</b> 2020021800		00.2			PCN Date: Feb 19, 2020			Feb 19, 2020		
Title: Qu	Title:     Qualify TI Chengdu as an additional Assembly site for select devices							es			
Customer Contact: PCN Manager					Quality Se	ervices					
Proposed 1 <sup>st</sup> Ship Date: Aug 19					Estimated Sample Availability:			Pr	rovided upon Request		
Change Type:											
Assembly Site					Design					er Bump Site	
Assembly Process			Data Sheet				<u> </u>		er Bump Material		
	ly Materials ical Specific			Part number change				$\underline{\square}$	Wafer Bump Process Wafer Fab Site		
	/Shipping/L			Test Site Test Process				$\exists$		er Fab Materials	
	/ Shipping/ L	aben	ing		10301100	.033		$\exists$		er Fab Process	
					PCN De	tails					
Description	of Change	e:									
Texas Instruments is pleased to announce the qualification of TI Chengdu as additional Assembly Site for Select Devices listed in the "Product Affected" Section. Material differences are as follows.											
_				U	ГАС	TI C	nengo	du			
Mount	compound			P7	0035		)7123				
	rame finish				te Sn		PdAu				
Reason for	Change:		•			•					
Continuity o											
Anticipated	impact or	n Fit,	Form,	Fun	ction, Qua	ality or Re	liabili	ity	(posi	tive / negative):	
None											
Anticipated	impact or	n Ma	terial D	ecla	ration						
No Impact to the Material Declaration released					Material Declarations or Product Content reports are driven from production data and will be available following the production release. Upon production release the revised reports can be obtained from the <u>TI Eco-Info website</u> . There is no impact to the material meeting current regulatory compliance requirements with this PCN change.						
Changes to product identification resulting from this PCN:											
Assembly Site     UTAC Thai Limited   Assembly Site Origin (22L)   ASO: NSE     TI Chengdu   Assembly Site Origin (22L)   ASO: CDA     Sample product shipping label (not actual product label)   ECAT: G4 = NiPdAu ECAT: G3 = Matte     INSTRUMENTS MADE IN: Malaysia 200:   Image: Comparison of the comparison											

Product Affected								
DRV8702DQRHBRQ1	DRV8702QRHBRQ1	DRV8703DQRHBRQ1	DRV8703QRHBRQ1					
DRV8702DQRHBTQ1	DRV8702QRHBTQ1	DRV8703DQRHBTQ1	DRV8703QRHBTQ1					

# **Qualification Report**

Automotive New Product Qualification Summary (As per AEC-Q100 and JEDEC Guidelines) Approve Date 12-Feb-2020

### **Qualification Results**

Data Displayed as: Number of lots / Total sample size / Total failed

Туре	#	Test Spec	Min Lot Qty	SS/Lot	Test Name / Condition	Duration	Qual Device: <u>DRV8702QRHBRQ1</u>	Qual Device: <u>DRV8703QRHBRQ1</u>
	Test	Group A – A	cceler					
PC	A1	-	3	22	SAM Analysis, Pre Stress	Completed	-	3/66/0
PC	A1	JEDEC J- STD-020 JESD22- A113	3	77	Preconditioning	Level 2- 260C	-	No fails
PC	A1	-	3	22	SAM Analysis, Post Stress	Completed	-	3/66/0
HAST	A2	JEDEC JESD22- A110	3	77	Biased HAST, 130C/85%RH	96 Hours	-	3/240/0
HAST	A2	-	3	1	Cross Section, Post bHAST 96 Hours	Completed	-	3/3/0
HAST	A2	-	3	30	Wire Bond Shear, Post bHast, 96 Hours	Wires	-	3/90/0
HAST	A2	-	3	30	Bond Pull over Stitch, post bHAST, 96 Hours	Wires	-	3/90/0
HAST	A2	-	3	30	Bond Pull over Ball, Post bHAST, 96 Hours	Wires		3/90/0
HAST	A2	JEDEC JESD22- A110	3	70	Biased HAST, 130C/85%RH	192 Hours	-	3/210/0
HAST	A2	-	3	1	Cross Section, Post bHAST 192 Hours	Completed	-	3/3/0
HAST	A2	-	3	22	SAM Analysis, Post bHAST, 192 Hours	Completed	-	3/66/0
HAST	A2	-	3	30	Wire Bond	Wires	-	3/90/0

Туре	#	Test Spec	Min Lot Qty	SS/Lot	Test Name / Condition	Duration	Qual Device: DRV8702QRHBRQ1	Qual Device: <u>DRV8703QRHBRQ1</u>
					Shear, Post bHast, 192 Hours			
HAST	A2	-	3	30	Bond Pull over Stitch, post bHAST, 192 Hours	Wires	-	3/90/0
HAST	A2	-	3	30	Bond Pull over Ball, Post bHAST, 192 Hours	Wires	-	3/90/0
тс	A4	JEDEC JESD22- A104 and Appendix 3	3	77	Temperature Cycle, - 65/150C	500 Cycles	-	3/298/0
тс	A4	-	3	1	Cross Section, Post T/C 500 Cycles	Completed	-	3/3/0
тс	A4	-	3	22	SAM Analysis, Post T/C, 500 Cycles	Completed	-	3/66/0
тс	A4	-	3	30	Wire Bond Shear, Post T/C 500 Cycles	Wires	-	3/90/0
тс	A4	-	3	30	Bond Pull over Stitch Post T/C 500 Cycles	Wires	-	3/90/0
тс	A4	-	3	30	Bond Pull over Ball Post T/C 500 Cycles	Wires	-	3/90/0
тс	A4	JEDEC JESD22- A104 and Appendix 3	3	70	Temperature Cycle, - 65/150C	1000 Cycles	-	3/230/1*
тс	A4	-	3	1	Cross Section, Post T/C 1000 Cycles	Completed	-	3/3/0
тс	A4	-	3	22	SAM Analysis, Post T/C, 1000 Cycles	Completed	-	3/66/0
тс	A4	-	3	30	Wire Bond Shear, Post T/C 1000 Cycles	Wires	-	3/90/0
тс	A4	-	3	30	Bond Pull over Stitch, Post T/C, 1000 Cycles	Wires	-	3/90/0
тс	A4	-	3	30	Bond Pull over Ball, Post T/C, 1000 Cycles	Wires	-	3/90/0
PTC	A5	JEDEC JESD22- A105	1	45	Power 1000 Temperature Cycle -40/125C		-	
PTC	A5	JEDEC	1	45	Power	2000	-	-

Туре	#	Test Spec	Min Lot Qty	SS/Lot	Test Name / Condition	Duration	Qual Device: <u>DRV8702QRHBRQ1</u>	Qual Device: DRV8703QRHBRQ1
		JESD22-			Temperature	Cycles		
		A105			Cycle -40/125C			
HTSL	A6	JEDEC JESD22- A103	3	45	High Temp Storage Bake 150C	1000 Hours	-	3/138/0
HTSL	A6	-	3	1	Cross Section, Post HTSL 1000 Hours	Completed	-	3/3/0
HTSL	A6	JEDEC JESD22- A103	3	44	High Temp Storage Bake 150C	2000 Hours	-	3/135/0
HTSL	A6	-	3	1	Cross Section, Post HTSL 2000 Hours	Completed	-	3/3/0

#### A1 (PC): Preconditioning:

Performed for THB, Biased HAST, AC, uHAST & TC samples, as applicable.

Ambient Operating Temperature by Automotive Grade Level:

Grade 0 (or E): -40C to +150C

Grade 1 (or Q): -40C to +125C

Grade 2 (or T): -40C to +105C

Grade 3 (or I) : -40C to +85C

E1 (TEST): Electrical test temperatures of Qual samples (High temperature according to Grade level): Room/Hot/Cold : HTOL, ED

Room/Hot : THB / HAST, TC / PTC, HTSL, ELFR, ESD & LU

Room : AC/uHAST

\*: 1 TC fail due to EOS not related to TC, 8D available.

Green/Pb-free Status:

Qualified Pb-Free(SMT) and Green

For questions regarding this notice, e-mails can be sent to the contacts shown below or your local Field Sales Representative.

Location	E-Mail
USA	PCNAmericasContact@list.ti.com
Europe	PCNEuropeContact@list.ti.com
Asia Pacific	PCNAsiaContact@list.ti.com
WW PCN Team	PCN ww admin team@list.ti.com

## IMPORTANT NOTICE AND DISCLAIMER

TI PROVIDES TECHNICAL AND RELIABILITY DATA (INCLUDING DATASHEETS), DESIGN RESOURCES (INCLUDING REFERENCE DESIGNS), APPLICATION OR OTHER DESIGN ADVICE, WEB TOOLS, SAFETY INFORMATION, AND OTHER RESOURCES "AS IS" AND WITH ALL FAULTS, AND DISCLAIMS ALL WARRANTIES, EXPRESS AND IMPLIED, INCLUDING WITHOUT LIMITATION ANY IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR NON-INFRINGEMENT OF THIRD PARTY INTELLECTUAL PROPERTY RIGHTS.

These resources are intended for skilled developers designing with TI products. You are solely responsible for (1) selecting the appropriate TI products for your application, (2) designing, validating and testing your application, and (3) ensuring your application meets applicable standards, and any other safety, security, or other requirements. These resources are subject to change without notice. TI grants you permission to use these resources only for development of an application that uses the

TI products described in the resource. Other reproduction and display of these resources is prohibited. No license is granted to any other TI intellectual property right or to any third party intellectual property right. TI disclaims responsibility for, and you will fully indemnify TI and its representatives against, any claims, damages, costs, losses, and liabilities arising out of your use of these resources.

TI's products are provided subject to TI's Terms of Sale (<u>www.ti.com/legal/termsofsale.html</u>) or other applicable terms available either on ti.com or provided in conjunction with such TI products. TI's provision of these resources does not expand or otherwise alter TI's applicable warranties or warranty disclaimers for TI products.